

## The Primal Blueprint Podcast – Episode #5: Supplementation with Mark Sisson

Topic timestamps:

The Primal Blueprint and supplementation: 00:44

Dealing with stress: 02:51

Vitamin D: 05:07

Omega 3s: 07:55

How to judge quality: 10:30

Antioxidants: 16:04

Damage control: 18:58

Probiotics: 19:31

Primal Fuel: 22:30

Compare other powders: 24:28

Whey protein isolate: 25:42

Risks: 29:12

Brad Kearns: Welcome to the Primal Blueprint podcast. I am here in the Malibu studios with our guest, Mark Sisson. Today we are going to talk about nutritional supplements. When you think about what the Primal Blueprint means, going back to basics and living simply, the idea of supplements could seem kind of counterintuitive. So let's start from that point and wonder why, if you are living and eating primally, would you want explore the idea of taking nutritional supplements?

Mark Sisson: [00:00:44] That's a good question that people have asked of the years since we've been doing the Primal Blueprint. Going back to the original intent of the Primal Blueprint which is to live and optimize life, to be as healthy as you can be, to enjoy life, to live as long as you can and not get sick, to have as much energy as you can possibly ever want to do the things you want to do. These are the reasons that we gauge in the recommendations and the activities in the Primal Blueprint. That's sort of informed the types of foods that you eat, the types of exercise that you choose to do, things like that. All of which is contemplated to take advantage of these gene switches in our bodies that turn on or off as a result of these various inputs. The idea behind the Primal Blueprint being one harnessing the aspects of evolution that we know would maybe benefit us individually in creating the leanest, strongest, happiest, healthiest productive human that we can based on this recipe that we have, this gene recipe. What I've gleaned from the science as well as all the years I have been involved in performance in athletics is that while there are a lot of things that we can do, a lot of choices we can make that will manifest that strong, lean fit body simply by choosing exercise and simply by eating a certain way, there are some things that we can do to that take advantage of the science. There are some supplements that we can use that will assist our bodies in either recovering from exercise quicker or generating a little bit more energy or predisposing us to building a little bit more muscle or maybe reducing our risk for certain types of disease or at least the risk factors of certain types of disease. At that's really the premise behind the Primal Blueprint. It's not just the how do we recreate history and evolution, but how do we tap in to modern science and what we know about how a gene expresses itself to live the best possible way.

Brad Kearns: [00:02:51] You also hear some critics saying it is very difficult to go back and approximate the healthy nutritious food that our ancestors ate in a simple low stress lifestyle. So it's possible supplements could be considered a modern hack to help you try to model the best possible lifestyle within the context of the all stresses today.

Mark Sisson: And that's a very accurate statement. You mentioned stress. There are any number of stresses that we bring on ourselves, whether it's worrying about the overdue mortgage payment, or the bills, or the traffic, or the noise next door, or whatever. We do have a lot of stress in our lives. Some people are able to deal with that through meditation or prayer or some other forms. To those people I say, "Bless you." because I can't do that very well so I need some nutritional support for me to better handle stress. So I look to certain supplements, certain phytonutrients, certain vitamins and minerals and so forth that can enhance my body's own natural ability to deal with stress. As a result of my investigation into that a few years ago, I created a product called Primal Calm. It is just simply a collection of some of these nutrients that help the body better deal with stress. Magnolia bark is what we call antialetic. It reduces the effects of anxiety in stressful situations. Phosphatidylserine, one of my favorite nutrients in the world. It's a critical component of nerve cell membranes. In fact, it's a critical component of all cell membranes. It has a working molecule the controls access to the inside of the cell. We don't get a lot of it in even our best possible diet. We don't make a lot of it in the best of times, our body doesn't manufacture a lot of it. And we don't get much from our diet, so it would make sense to be able to supplement with phosphatidylserine if it were shown to be safe and effective and not have any long term negative aspects. So for twenty years I have been taking phosphatidylserine for example. There are other aspects of this idyllic lifestyle of the Primal Blueprint if you eat right, then why should you have to take supplements?

[00:05:07] A great example is vitamin D. You might eat the perfect Primal Blueprint diet, which takes in a healthy amount of good fats, eliminates the bad fats, supports the manufacture of cholesterol, because cholesterol is where the vitamin D comes from. Probably one of the most important vitamins. Probably should even call it a hormone. Vitamin D is very important in the immune system, for example. You need sun in order to convert cholesterol just below the skin, into vitamin D to have this immune system function as well as it possibly can based on the amount of vitamin D. If you live any part of the United States in the winter time, you have a very difficult time getting 20 minutes of unprotected sun exposure on a daily basis, certainly in the winter time. If you live in the United States, particularly in the northern part, sometimes even in the summer you have a difficult time, or if you work in an office building, or you live in an urban environment, if you are not out getting sun. So it would make sense to supplement with a vitamin D supplement. They are inexpensive. They are sort of ubiquitous. You can get them just about anywhere. It makes good sense to be able to take advantage of that kind of technology where the D3 has been created in a very safe effective doses. You can't really overdose on it. You can use it comfortably. It is not to offset the diminished amount of vitamin D that you make on a regular basis because of lack of sun, for example.

Brad Kearns: I know you spoke about vitamin D in the Primal Connection. We have a great ebook coming out on vitamin D pretty soon. I think it is important reiterate that point that diet is such insignificant contribution to vitamin D levels. So we have sunlight which is a huge factor, and then with these supplements. What kind of IU's are we talking about in the supplements. What is your recommendation as to the amount a person should get in a day?

Mark Sisson: Well, I make a vitamin D3 supplement, very inexpensive. It is 2000 international units per capsule. People take 6 or 8 capsules a day, may be 10,000 IU's a day. If I were in a position where I was feeling like maybe a cold or flu was coming on, I might dose it up to 20,000 or 30,000 IU's a day for a couple of days. In fact, in some circles, the supplementing of vitamin D has sort of overtaken the old dosing of vitamin C when you feel a cold coming on. A few thousand international units a day supplements in the diet for someone not getting enough sun... I think it makes good sense. I think it's prudent.

[00:07:55] We talk about the healthy Omega 3 fats in the Primal Blueprint eating strategy. We try to eliminate the industrial seed oils, the hydrogenated oils, the oils and fats that are high in Omega 6, pro-inflammatory agents, and to try to cover that ground by increasing the amount of Omega 3 that we take in. But a lot of sources of Omega 3 are expensive. Line-caught wild salmon can be wickedly expensive depending on what part of the country you live in. It may not even be available. Certain types of oily deep water fish which are good sources of Omega 3. If you are not getting them on a regular basis, it might make sense for you to supplement your diet with an Omega 3 capsule. These are capsules that are derived typically from fish sources or often krill sources. They provide high levels of EPA and DHA. These are the two critical components of Omega 3 fatty acids. A lot of people say, "I can get Omega 3 from flaxseed oil," for instance, or from vegan or vegetarian sources. But the reality is that alkenoic acid, which is one of the forms in which we receive Omega 3 does not get converted in to the really critical components of eicosapentaenoic acid and docosahexaenoic acid (EPA and DHA) which are just readily available in fish oil capsules. Some people have expressed themselves, these fish oils can get rancid or they may not be as pure as people say. A lot has changed over the last ten years. The methods of purifying the fish oil capsules are rigorously controlled by what we call the GMP (Good Manufacturing Practices) of the co-packing industry and I have something like a thousand strategies and it's all overseen by the FDA in some cases who oversee and set the rules and the standards for manufacturing supplements.

So there are number of reasons why I might suggest taking supplemental Omega 3 capsules. They are not expensive. They are quite practical. They are quite inexpensive.

Brad Kearns: [00:10:14] You talked about phosphatidylserine, the vitamin D or vitamin D3, specifically, is what you look for on the shelves and then the Omega 3s. Is there sort of tips about, when we get bombarded in the big box stores with these many many choices, any sort of guidelines to think about for quality?

Mark Sisson: Yes. One of the initial reasons I started my supplement company was because I wanted to make stuff on a regular basis that I could ship directly to people's homes and have them consume them as readily and quickly as possible. Because what happens with a lot of these supplements is they have at one time living or organic material that can degrade fairly rapidly. A typical distribution scenario for vitamins and minerals, and supplements is that a large manufacturer might make a huge batch. They might ship it to a distributor. The distributor might hold on to it for months, or even a year at a time before it gets in to a health food store where it may sit on the shelf for several more months until you blow the dust off it and check the expiration date. A lot of times these companies are very liberal with their expiration dates. They might put a three year expiration date. That doesn't mean it is going to be bad for you if you take it three years out, but it means that it lost 80% of its potency. So one of the things to look at is the expiration date. Another is to take in to consideration is that some of these products made by the big box distributors or whatever, may be been sitting on various and sundry shelves a long time before they make it into your pantry, kitchen or medicine cabinet.

Another thing that I try to do with my approach to this supplementation problem. It's not a problem but a challenge to some people. A lot of people walk in to a health food store and they are inundated, with literally, with 20,000 different SKUs. There's 75 vitamin C choices, and 45 different vitamin E choices, and different forms of vitamins. So seventeen years ago, I thought to myself, "If I were a person who wanted to take advantage of the best supplements the industry had to offer, I didn't want to be chasing around aisle after aisle for a basket of goodies, trying to fill that basket with 25 bottles of the best possible nutrients that the research has shown to be effective, what would I do?" What I would do is put together what I call the master formula. This is an opportunity for people who are really interested in taking advantage of the best supplementation has to offer by combining the top ingredients: vitamins, minerals, phytonutrients. So this product has COQ10, resveratrol, Alpha Lipoic Acid, Grapeseed extract, green tea extract, milk thistle, and phosphatidylserine, one of my very favorite nutrients, and 40 others that I haven't mentioned in, what we would call, therapeutic doses. Those kind of doses that people would normally take a bottle at a time, in the health food store. But now we got rid of all of the fillers and binders and excipients and extruding agents that all these other things and put them in to six easy to swallow capsules that we take once or twice a day. I am sorry if I am starting to sound like an infomercial here but the reality is that I believe strongly in supplementation, and in many cases high protein supplementation for a number of reasons. I'll give you one example, Resveratrol which has been in the news a lot lately for its sort of anti-aging benefits. I am looking now at some research that shows that resveratrol may advance some mitochondrial biogenesis. Mitochondrial biogenesis is my favorite word. It's what we are striving to achieve when we are taking on a low carb or ketogenic or very low carb or paleo or primal eating strategy where we are cutting out the excess carbohydrates. We are trying to become that fat-burning beast. We become a fat-burning beast. We become better at burning fat, and burning off our stored body fat, and burning ketones by rearranging some of the metabolic machinery in the body. Part of building that metabolic machinery is increasing the proliferation of mitochondria. Mitochondria, the powerhouse of the cells, where the beta oxidation of fats and some of the carbohydrates takes place. We want to increase the number and the

efficiency of the mitochondria. If I can take a supplement that will help me do that, why would I not choose to do that? If my increasing the number and efficiency of the mitochondria in my cells, increasing my energy, increasing my ability to burn fat, making me better at sub-maximal performance as an endurance athlete, why would I not take advantage of that? And if you look at all of the nutrients that people do supplement with now, some of them have a tremendous amount of research behind them. Some of them have a almost none and are probably not worth your taking. But my hobby for the last twenty years has been in human performance and how do I get the most out of this body that I have been given and how I accentuate the DNA recipe that exists within me by taking advantage of supplements and my eating strategy. That's really why I have this master formula.

[00:16:04] I am also a big fan of anti-oxidants. Go back to the stress question. One of the problems with stress is it increases oxidative damage. One of the problems with a high-carbohydrate diet is it increases oxidative damage, and free radical output. So what can I add to my diet that will reduce that amount of free radical damage that will mitigate some of that damage, that will decrease the free radicals? Really, that's the intention behind supplements. Now these are choices. Do I have to supplement? No. It is quite likely or possible if that i don't supplement, I will live a long, happy, healthy, productive life. Absolutely. But where I am coming from having read the research and being very interested in manifesting the ultimate expression of my body in the way I envision for myself, which is to still be still playing Frisbee at 85 years old, or going for a stand-up paddle, or snow boarding. I want to do all the things I can do to preserve my energy, to preserve my real mass, to preserve my fat process. A lot of these supplements that we are looking at these days, like Omega 3, for instance, will have made an impact in cognition and brain power, if you will. I want to take advantage of all those things. You know if I can afford it, why would I not want to do that?

Brad Kearns: [00:17:30] Speaking about human performance and being the best you can be, I think it is important to distinguish, especially when we come from the athletic world, where there is so much hype and misinformation that you are going to take something and you are going to feel beyond normal, you are going to feel awesome. It's going to hype you and directly improve your performance. It's not about that, is it?

Mark Sisson: No. In fact one of the problems, if you will, with supplementation, it's not really a problem, but you are not supposed to notice it immediately. It's not like taking ephedrine or something where you get amped up rather quickly when you increase the amount of vitamin D in your system. It's a fat soluble vitamin. It is absorbed all the time. It takes a while to get incorporated at what we call tissue level saturation. But over time, theoretically you will feel better. Theoretically you will perform better by taking some of these supplements. No guarantees. But you shouldn't notice a big change or improvement in an acute phase, like just taking it for a couple of days. The one maybe caveat is I have had people take Primal Calm who were under a tremendous amount of stress and feel it within a couple of days. But for the most part you are doing it for a long term strategy, not just a 30 day program or a 90 day program.

Brad Kearns: [00:18:58] Like you say for damage control or prevention and those kinds of things, it's not as easy to buy in to the hype. So if you are making budget decisions and things like that, astute observers will notice that we are talking through your product line. So just to recap, we have the vitamin D, the Omega 3, the phosphatidylserine, and then the multi-vitamin, anti-oxidants. So if someone is coming in thinking, "Yeah, I want to be better. I'll try some stuff." That would probably be along the lines of what they would start out with.

Mark Sisson: [00:19:31] The other thing is pro-biotics. You are going to see in the next five years that gut health is going to take a front seat to everything that has happened in health. We are starting to see it our space right now with discussions on microbio, with studies on mapping individual microbio. By microbio, I mean the healthy and unhealthy bacteria that reside in the gut. That is the 60 to 80 trillion bacteria that reside in your gut. The most of you that is not you. With this attention on gut health, part of that is impacted by bad diet. If you have a bad diet, you are not feeding your gut bugs the way you should and some of the unhealthy bacteria take over and you get sick. Or if you have encountered a situation where you are taking antibiotics where you are killing off the bad bacteria, you automatically kill off the good bacteria. Now you have to repopulate your gut with some kind of healthy bacteria. So one of the ways that we evolved, which made it no issue. First of all we had no antibiotics and second of all, we didn't have the poisonous food that we have now. Third of all, we ate dirt every day. So every bite of food we ever took 10,000 years ago even 200 years ago contained microbes that would teach your immune system how to fight much more dangerous microbes. And it was the education of the immune system that depended on the intake of germs from the soil..from soil organisms. But now that we are in this modern age of hygiene and Purell and washing our hands before every meal after we touch a door knob, we no longer have this schooling of the immune systems and we have to sort of rely on probiotics to repopulate our gut and with that in mind for the last 15 years I have been a big proponent of taking a pro-biotic supplement whether it's fermented sauerkraut or Kefir or any number of fermented foods, yogurt would be a good example. There is still the necessity of introducing some of the healthy bacteria, acidophilus, bifidus, and so on in to the system on a regular basis to replant the seeds of healthy bacteria who would then take root and sort of push out the bad bacteria. But if you don't have access to the probiotics on a regular basis, you may experience some gut issues. So I create Primal Flora which is an inexpensive pro-biotic. I used to not take a daily pro-biotic because I thought I have a healthy gut and I have cut out all these types of foods from my diet, I ought to be in pretty good shape. I found out that as was taking it more and more frequently, I actually felt better and better. I am a fan of daily supplementation with a pro-biotic.

Brad Kearns [00:22:30] So at PrimalBlueprint.com you can read more details about all these products. One that has become more popular recently is Primal Fuel. Talk about where that fits in.

Mark Sisson: Primal Fuel is the new replacement that I created because I was having a difficult time talking about the necessity of avoiding all of these junk foods and crappy meals and trying to eat as healthy as you could at every meal. Yet, I found my self at

times without access to, say, eggs to make an omelet or with no time to make even a two-minute big-ass salad. I wanted to have a product that I could mix with water, that would taste great, that would have the ingredients that I wanted, that would have a macro-nutrient profile that was healthy fat from coconut that is the gold standard of protein, that protein isolate that had some of the pre-biotics that help feed those probiotics that microbio of the gut and that became Primal Fuel that became extremely popular. A lot of people who depend on some form of supplemental meals like people working in the field, even a lot of soldiers overseas who order Primal Fuel because for them it is the best source of nutrition they can get in between going off on sorties and adventures all the things they are doing overseas. It has become very popular among the service men. It is very popular among trainers now who get up at 5:00 o'clock in the morning and have their first client at 6:00 and the next one at 7:00 and the next at 8:00. They don't have a chance to eat breakfast and the next thing you know it is 1:00 and they haven't eaten. So it's a great meal replacement/snack. 22 grams of protein, a couple of grams of carbohydrates, and 14 grams of healthy fat from coconut. How can you go wrong?

Brad Kearns: [00:24:28] So that makes it quite different from many many other supplements, the powdered meal replacements that you see on the shelf.

Mark Sisson: A lot of those are either protein only or there are some that are protein powders that are sweetened and flavored but they don't have any of the fat or some of the other micro-nutrition that we put in the Primal Fuel. On the other hand, there is the mass gainers that are largely carbohydrate that are mega sources of calories for people who want to put on weight. This is not what I'm about. I want to build muscle and not put on fat and maintain my muscle mass and control my appetite. One of the things we notice about Primal Fuel is that for a lot of people it's a great snack because it is just under 200 calories and it might take the edge off hunger for the next 5 or 6 hours. If you have got work you have to do or you are training or you just don't feel like sitting down and preparing a real food meal, this is a great second alternative. I would always recommend that people eat real food first, but in the event that you can't or you don't have access to it or it's not convenient, this is the best second choice.

Brad Kearns: [00:25:42] So, speaking of the protein which is a very popular category and I see my soy protein for \$9.00 or the vegetarian protein and you said that micro-filtered whey protein isolate is the best. So that is the distinction that it carries a bigger price tag, but also why is it so much better?

Mark Sisson: Well it is just the amino acid profile is better. The systems that rate amino acid profiles from hemp protein and pea protein and soy protein up through albumin and on up through whey protein concentrate and the highest of bio availability is from whey protein isolate. So that's really the reason that you want to take a whey protein isolate. Also whey protein concentrate, for instance, might have some residue of lactose in it. If you might be lactose intolerant, that might not be a good choice for you. Some proteins are made with just the casein component of the by-product of the milk industry. The casein for a lot of people is also an irritant and has exhibited a certain large segment of

the population that can't handle casein as a protein. So whey protein isolate is really the gold standard in these meal replacement products.

Brad Kearns: [00:26:55] Okay. We have covered some of the major most interesting categories of supplements that you offer and that are offered out there that you recommend. Is there anything else, perhaps that you might be making something in the future or other supplements you think might be worth considering?

Mark Sisson: Yes. If you are an athlete, there are some great supplements out there that are really on the cutting edge. If you a low-carb ketogenic athlete there are some super starches that have come on the market right now. This U-Can product is being used by athletes around the world who are trying to stay in ketosis, burn more and more fat but they have to have some access to some amount of carbohydrates. That's a great product. How it works is it's a slow burning, long burning carbohydrate choice. It is long chain glucose polymer. You don't really turn off ketosis while you take this, but you have enough glucose to keep the brain functioning during even high end aerobic activity.

Brad Kearns: So it doesn't spike because of the molecule pattern.

Mark Sisson: Right. It doesn't change insulin. It doesn't spike insulin and, as a result, doesn't turn off ketosis. So that's a great one. For the most part, I only have these particular supplements because I am pretty clear that everything else you can get from the food that your are eating and while you can walk in to a health food store and you can experiment all you want with all sorts of esoteric individual supplements and I would encourage you if you are a hacker or a bio hacker, if you want to try that. Go for it. From my end, I make these for me; for me and my family and my friends. So if I need a product that does this, I make a product that does that. And I use them. I use all my products for that reason. Having said that, I haven't found anything else right now that I am compelled to develop. I think I have a very well rounded arsenal of supplements that do what I intend which is to enhance the structure and function of my cells so that I can rebuild, repair, regenerate, renew myself on a daily basis through the types of food that I'm eating at my meals, the exercise I am doing, the amount of sleep, the amount of sun I get and in some small margin to the supplements that I am taking.

Brad Kearns: [00:29:12] Speaking of going in there and doing that one off stuff, however, when you talk about the master formula and how you balance everything synergistically. So if you go in the store to buy some calcium, because you heard that it is going to be good for bones, there's a little bit of a risk involved if you just pot-shotting like that.

Mark Sisson: Individual nutrients have always been an issue with me because, and calcium is a good example. People will say, "I have read about osteoporosis, I think I'll take some calcium and that will help me build bigger bones." Well, calcium is like fourth on the list of things you need to do to build stronger bones. First of all you need to have your diet in place. You need to be controlling stress. You need to be doing weight-bearing activity so your bones will want to get stronger. Yes, you need some calcium, but

you need some boron. You need some vitamin D, and some, other cofactors like K-2 that are going to be involved in the synthesis in that bone tissue. So you just throw calcium at it, it may be that nothing happens. That's one of the dangers of doing this one off supplementation. One more example, there was a time when studies were done on vitamin E by itself and determined that taking individual vitamin E had a small increase risk for heart disease beyond not taking vitamin E at all. And people said, " Gee, vitamin E must be dangerous. I am not taking vitamin E at all." The reality was that by just selecting vitamin E and just selecting the alpha tocopherol component of vitamin E and not the mixed tocopherols and you didn't have the gamma tocopherol which is even more important, or the delta or any of the other tocopherols, or the tocotrienols. Just looking at alpha tocopherol acetate, for instance. Yes, that's an antioxidant until it gives off its electrons and then it becomes a pro-oxidant. So now unless you have something to recycle that vitamin E back to its antioxidant form, it becomes a bad guy. That's one of the reasons when I look at damage control master formula, is how do we get all these synergistic components to work together? So vitamin C, CoQ10, all these things you can help recycle vitamin E, back to its antioxidant form without it becoming a pro-oxidant. That and the fact that we have mixed tocopherols. We do have the gamma. We do have the tocotrienols and all the other sub-fractions of vitamin E that are so critical to what makes vitamin E a effective antioxidant.

Brad Kearns: Thanks for the great overview, Mark Sisson, on the Primal Blueprint podcast. And to learn more about all the supplements you discussed go to [PrimalBlueprint.com](http://PrimalBlueprint.com) and also at [PrimalBlueprint.com](http://PrimalBlueprint.com), you can learn about something that's way better than your vitamin D supplement and that is way more fun for your vitamin D needs. And that's heading down to Primalcon Tulum in March. There's no vitamin D making in the continental U.S. or Europe, so you've gotta head down to Cancun. Thank you for listening and we hope you can join us at Primalcon Tulum March 1st through 6th, 2014. It's a five-star resort on the Mexican Riviera.